

REPORT

50X1-HUM

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SUPPLEMENT TO
REPORT NO.

THIS IS UNEVALUATED INFORMATION

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The ratio is 62:6

7. [] the type, diameter and number of blades of the propeller?

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Type: VISH
Diameter: 3.20 m
Propeller blades: metal
Number of blades: three
Pitch control: automatic, constant speed; oil pressure, R-7 type;
oil pressure increased to 23 kg/cm² from 6 kg/cm² in order to
change pitch.

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8. [] types of lubricating oils are used []

In spring and fall: MK type
In winter: MZS type
In summer: MS type

9.

10.

11.

the following information on the VK-105 Aero engine.

HP

Take-off: 1300
Normal climb (in both supercharge gears): 1300 (in 1st gear at 3000 m
altitude); 1000 (in 2nd gear at 4500 m altitude)
Maximum cruising power: 1000
Combat power: 1300

RPM

Ratio: 2 (crankshaft) to 1 (propeller)
Take-off: 2600 (crankshaft)
Normal climb: 2600 (1st gear); 2300 (2nd gear)
Maximum cruising power: 2000 (crankshaft)
Combat power: 2600 (crankshaft)

Height for given power:

3000 m altitude - 1300 hp
4500 m altitude - 1000 hp

Boost Pressure

Take-off: 1100 Hg mm
Normal climb: 1000 Hg mm (in both supercharge gears)
Maximum cruising power: 900 Hg mm
Combat power: 1100 Hg mm

Fuel consumption

Take-off: 230 gr per hp per hour
Normal climb: not known
Maximum cruising power: 210 gr per hp per hour
Combat power: probably 230 gr per hp per hour

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12. [redacted] types of propellers are fitted to these engines [redacted]

VK-105 Aero Engine

Propeller type: VISH-105

Blades: three; metal

Pitch control: automatic, constant speed; oil pressure, R-7 type.
(VK-105 engines are equipped with six carburetors, one for two cylinders)

13.

[redacted] the VK-107. It was used in the YAK-9 and the PE-2.

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14.

[redacted] The compressor to crankshaft rpm ratio was 62:6 in 1st gear, 85:8 in 2nd gear. The compressor was equipped with a Polikhovsky automatic air intake control valve. The generator was 550 watts, 24 volts. The magnetoes were BSM type. This engine had six carburetors, one for every two cylinders. [redacted] the following information on the performance of the VK-107 engine.

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HP:

1650 at 5500 m altitude with compressor in 1st gear at 3100 rpm (crankshaft)

1200 at 10000 m altitude, with compressor in 2nd gear at 2800 rpm (crankshaft)

1500 at 7000 m altitude, with compressor in 2nd gear at 3000 rpm (crankshaft)

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